

Date: Tuesday, 15/07/2008 4:12:54 PM  
 User: Julie Lecocq

## Process Sheet

|                                    |  |                           |                   |
|------------------------------------|--|---------------------------|-------------------|
| <b>Customer</b> :                  | CU-DAR001 Dart Helicopters Services  | <b>Drawing Name</b> :     | AFT TUBE ASSEMBLY |
| <b>Job Number</b> :                | 40524  |                           |                   |
| <b>Estimate Number</b> :           | 10699  |                           |                   |
| <b>P.O. Number</b> :               |  | <b>Part Number</b> :      | D3391025          |
| <b>This Issue</b> :                | 15/07/2008   | <b>Drawing Number</b> :   | D3391 REV G       |
| <b>Prsht Rev.</b> :                | NC   | <b>Project Number</b> :   | N/A               |
| <b>First Issue</b> :               | / /  | <b>Drawing Revision</b> : | G                 |
| <b>Previous Run</b> :              | 39129  | <b>Material</b> :         |                   |
| <b>Written By</b> :                |  | <b>Due Date</b> :         | 08/08/2008        |
| <b>Checked &amp; Approved By</b> : | JLD 08.7.16  | <b>Qty:</b>               | 1 Um: Each        |
| <b>Comment</b> :                   | Est Rev B 06-02-07 ECN773 dwg rev. D EC<br>Est Rev:C 06-03-28 Update Manuf. Instructions JLM<br><br>est rev D 07.03.20 revF dwg EC<br>est rev E 07.11.07 rev G dwg ecn 1053p EC verified by:<br>DD<br>Est Rev:F 07-11-13 ECN 1056 DD verified by: EC |                           |                   |

## Additional Product

Job Number:



|                |                              |                      |
|----------------|------------------------------|----------------------|
| <b>Seq. #:</b> | <b>Machine Or Operation:</b> | <b>Description :</b> |
|----------------|------------------------------|----------------------|

|     |          |                    |
|-----|----------|--------------------|
| 1.0 | D6014090 | ALUMINUM EXTRUSION |
|-----|----------|--------------------|



**Comment:** Qty.: 1.0000 f(s)/Unit Total: 1.0000 f(s)

ALUMINUM EXTRUSION

Pick:

|     |             |             |       |
|-----|-------------|-------------|-------|
| Qty | Part Number | Description | Batch |
|-----|-------------|-------------|-------|

|   |           |           |        |
|---|-----------|-----------|--------|
| 1 | D6014-090 | Extrusion | B32309 |
|---|-----------|-----------|--------|

Identify as D3391-3

G-m 08.07.30 ①

|     |            |                            |
|-----|------------|----------------------------|
| 2.0 | MORI SEIKI | MORI SEIKI CNC LATHE LARGE |
|-----|------------|----------------------------|

**Comment:** MORI SEIKI CNC LATHE LARGE

Turn as per Folio FA599

Rev: G &amp; Dwg D3391 Rev: AA

G-m 08.07.30 ①

|     |     |  |
|-----|-----|--|
| 3.0 | QC2 | INSPECT PARTS AS THEY COME OFF MACHINE |
|-----|-----|--|

**Comment:** INSPECT PARTS AS THEY COME OFF MACHINE

G-m 08.07.30 ①

|     |       |                                |
|-----|-------|--------------------------------|
| 4.0 | HAAS1 | HAAS CNC VERTICAL MACHINING #1 |
|-----|-------|--------------------------------|

**Comment:** HAAS

1-Machine as per Folio FA 599 Rev: AA &amp; Dwg D3391 Rev: G

2-Deburr

J.L 08/08/01

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

NOTE: Date & initial all entries

Date: Tuesday, 15/07/2008 4:12:54 PM  
User: Julie Lecocq

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: AFT TUBE ASSEMBLY

Job Number: 40524

Part Number: D3391025

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

QC2

INSPECT PARTS AS THEY COME OFF MACHINE



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

JL 08/08/01

6.0

QC8

SECOND CHECK



Comment: SECOND CHECK

J-F 08/08/05 (1)

7.0

SKIDTUBES 1

SKIDTUBESS RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Drill (PILOT HOLE) aft cap holes per Dwg D3391 using DT8803

DP 8-8-5

8.0

BENDING

BENDING MACHINE - SKIDTUBES



Comment: NC Bender

Form as per Dwg D3391 Using Bend Prog 3391025

DP 8-8-5

9.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

8 08/08/05 (+0)

10.0

SKIDTUBES 1

SKIDTUBESS RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Open Aft cap pilot hole to .208" as per Dwg D3391

2-Drill float bag holes using DT8809 as per Dwg D3391(Holes marked "A" Only.

3-Drill wearplate holes as per Dwg D3391 using DT8878(Mid Tube) & DT8217 Wearplate Jig .

\*\*\*\*\*Do Not Open To Finished Size\*\*\*\*\*

4-Drill Wearshoe holes as per DWG D3391 using DT8939 locating from 2 previously drilled aft wearplate holes.

5-Open wearplate holes to 0.250" and c/sink as per dwg D3391

6-Open up all wearshoe , wearplate and float bag holes as per Dwg D3391.

7-Deburr

H 8-8-6

H 8-8-7

Tools: rill

# Dart Aerospace Ltd

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                                |                                 |                |                           |                       |                          |
|------|------|----------------------------------|--------------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action<br>Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng           | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                                |                                 |                |                           |                       |                          |
|      |      |                                  |                                |                                 |                |                           |                       |                          |
|      |      |                                  |                                |                                 |                |                           |                       |                          |

NOTE: Date & initial all entries

Date: Tuesday, 15/07/2008 4:12:54 PM  
User: Julie Lecocq

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: AFT TUBE ASSEMBLY

Job Number: 40524

Part Number: D3391025

Job Number:



Seq. #:

Machine Or Operation:

Description :

11.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

50/8/12 (X)

12.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Acid etch and Alodine as per QSI 005 4.1

am 08.08.08 (D)

13.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

H 7-8-12

14.0

D36704200

SPACER



Comment: Qty.: 4.0000 Each(s)/Unit Total: 4.0000 Each(s)

SPACER

batch:

36818

(4)

H 8-8-12

15.0

SKIDTUBES 1

SKIDTUBESS RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

Instal spacers as per dwg D3391

A/R Magnabond 6398 Batch:

M 102621

exp. date:

08-08-12

cure time 12hrs as per QSI0015

) H 8-8-12

16.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

1080614 (D)

17.0

POWDER COATING

POWDER COATING



M 108523



(1X)

Comment: POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3

START TIME:

11:20

OVEN TEMPERATURE:

320

FINISH TIME:

11:50

M. 08/08/14

**Dart Aerospace Ltd**

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

Date: Tuesday, 15/07/2008 4:12:54 PM  
User: Julie Lecocq

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: AFT TUBE ASSEMBLY

Job Number: 40524

Part Number: D3391025

Job Number:



Seq. #:

Machine Or Operation:

Description :

18.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

08-08-18

(X)

19.0

D2646

Aft Cap



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Aft Cap

Pick:

Qty Part Number Description Batch

1 D2646

Aft Cap

1337377

92

20.0

D35371

Wearpad



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

WEARPAD

1338941

92

21.0

D35377

Wearpad



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Wearpad

133869

92

22.0

D35531

Gasket



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Gasket

1332740

92

23.0

D35533

Gasket



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Gasket

133870

92

24.0

D36721

Phenolic Washer



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

PHENOLIC WASHER

1339275

92

25.0

ALS41032130

Insert



Comment: Qty.: 14.0000 Each(s)/Unit Total : 14.0000 Each(s)

INSERT

batch: M105819

92

08.08.18

(X)

**Dart Aerospace Ltd**

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries



Date: Tuesday, 15/07/2008 4:12:54 PM  
User: Julie Lecocq

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: AFT TUBE ASSEMBLY

Job Number: 40524

Part Number: D3391025

Job Number:



Seq. #:

Machine Or Operation:

Description :

or equivalent per  
QSI 017

26.0

ALS41032225

Insert



Comment: Qty.: 12.0000 Each(s)/Unit Total : 12.0000 Each(s)  
INSERT  
or equivalent  
Per QSI 017 M100489 *jel*

27.0

AN3C4A

BOLT



Comment: Qty.: 6.0000 Each(s)/Unit Total : 6.0000 Each(s)  
Bolt  
Pick:  
Qty Part Number Description Batch  
2 AN3C4A Bolt M108599 *ll*

28.0

AN3C5A

Bolt



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)  
Bolt M108744 *ll*

29.0

AN960C10L

washer



Comment: Qty.: 10.0000 Each(s)/Unit Total : 10.0000 Each(s)  
Inventory  
Pick:  
Qty Part Number Description Batch  
2 AN960C10L Washer M108672 *ll*

30.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: SMALL & MEDIUM FAB RESOURCE 1  
✓ 1-Install inserts as per Dwg D3391

✓ 2-Install Aft Cap as per Dwg D3391  
A/R Sikaflex-241/-291 M108801  
Sikaflex expiry date: 08/10

*ll* 08-08-18 (11)

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                                |                                 |                |                           |                       |                          |
|------|------|----------------------------------|--------------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action<br>Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng           | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                                |                                 |                |                           |                       |                          |
|      |      |                                  |                                |                                 |                |                           |                       |                          |
|      |      |                                  |                                |                                 |                |                           |                       |                          |

NOTE: Date & initial all entries

Date: Tuesday, 15/07/2008 4:12:54 PM  
User: Julie Lecocq

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: AFT TUBE ASSEMBLY

Job Number: 40524

Part Number: D3391025

Job Number:



Seq. #:

Machine Or Operation:

Description :

31.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

08-08-27 (1)

32.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: W/O 39105A

D412-742-043

08-08-27 (1)

33.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

(1)  
08-08-28

Job Completion



mf 08-08-28

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

NOTE: Date & initial all entries

|  |               |                             |
|--|---------------|-----------------------------|
| <b>DART AEROSPACE LTD</b>                |               | <b>Work Order:</b> 40.524   |
| <b>Description:</b> Float Skidtube (412) |               | <b>Part Number:</b> D3391-3 |
| <b>Inspection Dwg:</b> D3391             | <b>Rev:</b> G | <b>Page 1 of 1</b>          |

### FIRST ARTICLE INSPECTION CHECKLIST

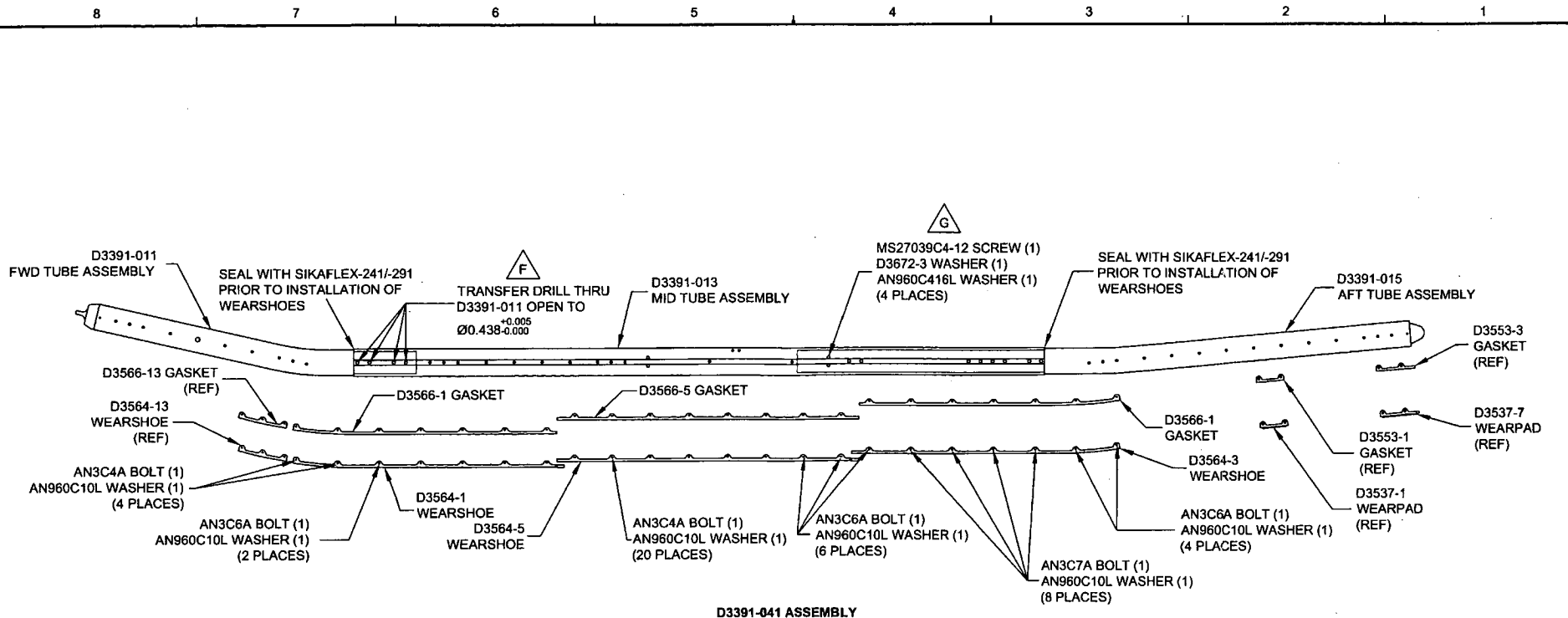
☒ First Article ☐ Prototype

checked  
B7 &  
08/08/05

| Drawing Dimension | Tolerance     | Actual Dimension | Accept | Reject | Method of Inspection | Comments |
|-------------------|---------------|------------------|--------|--------|----------------------|----------|
| 14.000            | +/-0.010      | 14.000           | ✓      |        |                      |          |
| 3.500             | +/-0.010      | 3.495            | ✓      |        |                      |          |
| 88.93             | +/-0.030      | 88.930           | ✓      |        |                      |          |
| 44.995            | +/-0.030      | 44.995           | ✓      |        |                      |          |
| 3.200             | +/-0.010      | 3.207            | ✓      |        |                      |          |
| 1.526             | +0.000/-0.030 | 1.520            | ✓      |        |                      |          |
| 0.200             | +/-0.010      | .202             | ✓      |        |                      |          |
| 7.500             | +/-0.010      | 7.500            | ✓      |        |                      |          |
| 27.750            | +/-0.010      | 27.750           | ✓      |        |                      |          |
| 31.750            | +/-0.010      | 31.750           | ✓      |        |                      |          |
| 35.250            | +/-0.010      | 35.250           | ✓      |        |                      |          |
| 3.300             | +/-0.010      | 3.296            | ✓      |        |                      |          |
| 0.200             | +/-0.010      | .202             | ✓      |        |                      |          |
| 3.520             | +/-0.010      | 3.523            | ✓      |        |                      |          |
| 0.687             | +0.010/-0.000 | .688             | ✓      |        |                      |          |
| R0.062            | +/-0.010      | .062             | ✓      |        |                      |          |
| Ø0.484            | +0.005/-0.001 | .486             | ✓      |        |                      |          |
|                   |               |                  |        |        |                      |          |
|                   |               |                  |        |        |                      |          |
|                   |               |                  |        |        |                      |          |
|                   |               |                  |        |        |                      |          |
|                   |               |                  |        |        |                      |          |
|                   |               |                  |        |        |                      |          |

|                               |                         |                            |     |
|-------------------------------|-------------------------|----------------------------|-----|
| <b>Measured by:</b> A.M./J.L. | <b>Audited by:</b> J.F. | <b>Prototype Approval:</b> | N/A |
| <b>Date:</b> 08.07.30         | <b>Date:</b> 08/08/05   | <b>Date:</b>               | N/A |

| Rev | Date     | Change                       | Revised by | Approved |
|-----|----------|------------------------------|------------|----------|
| A   | 06.04.24 | New Issue P/O D3391-015/-025 | KJ/JLM     |          |
| B   | 06.06.19 | Dwg revision update          | KJ/JLM     |          |
| C   | 07.04.20 | Ø0.208 dimension removed     | KJ/JLM     |          |
| D   | 07.09.06 | 0.400 dimension removed      | KJ/JLM     |          |
| E   | 07.11.23 | Dwg Rev. updated             | KJ/EC/DD   |          |



**D3391-041 ASSEMBLY**

**RELEASED**  
07-11-07

**D3391-041 FLOAT SKIDTUBE ASSEMBLY PARTS LIST**

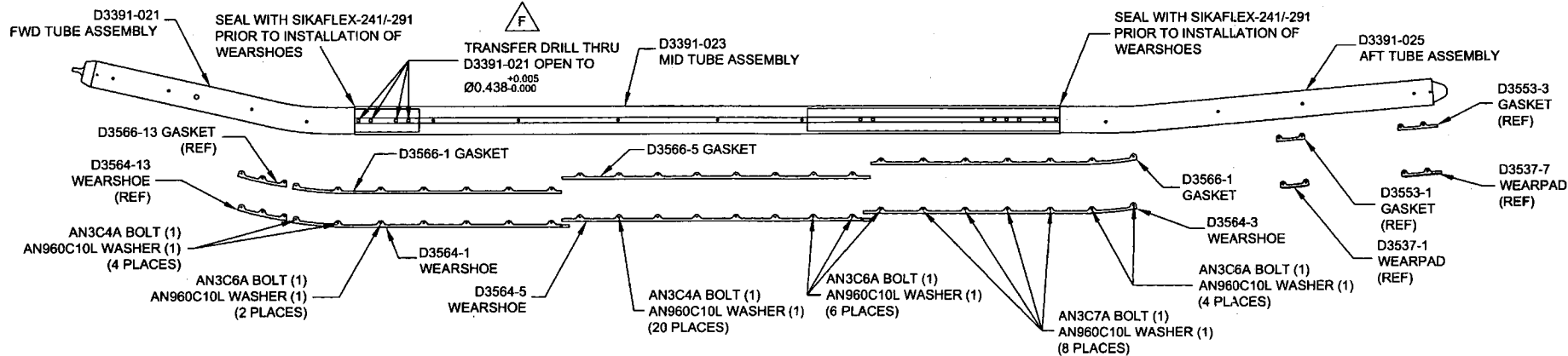
| QTY | PART NUMBER  | DESCRIPTION             |
|-----|--------------|-------------------------|
| X   | D3391-041    | FLOAT SKIDTUBE ASSEMBLY |
| 1   | D3391-011    | FWD TUBE ASSEMBLY       |
| 1   | D3391-013    | MID TUBE ASSEMBLY       |
| 1   | D3391-015    | AFT TUBE ASSEMBLY       |
| 1   | D3564-1      | WEARSHOE                |
| 1   | D3564-3      | WEARSHOE                |
| 1   | D3564-5      | WEARSHOE                |
| 2   | D3566-1      | GASKET                  |
| 1   | D3566-5      | GASKET                  |
| 4   | D3566-13     | WASHER                  |
| 24  | AN3C4A       | BOLT                    |
| 12  | AN3C6A       | BOLT                    |
| 8   | AN960C10L    | BOLT                    |
| 24  | AN960C10L    | WASHER                  |
| 4   | MS27039C4-12 | SCREW                   |
| 4   | AN960C416L   | WASHER                  |

**GENERAL NOTES**

- 1) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 2) SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND AFTER INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL Ø0.297 SIZE HOLES FOR WEARSHOE INSERTS. CBORE AS NOTED AND INSTALL INSERTS EXCEPT WHERE INDICATED.

|            |   |   |          |
|------------|---|---|----------|
| G          | REPLACE NAS INSERTS W/ AELS INSERTS SWITCH TO D3670-XXXX SPACERS FOR INSTALLING FLOAT BAGS, DWG REORGANIZED FOR CLARITY | DC  | 07.07.31 |
| F          | ADD SS WEARSHOE, GASKET REMOVE FWD SADDLE HOLE -011/-021  | PH  | 07.01.18 |
| E          | CHANGE TOLERANCE, EASE MANUFACTURE  | PH  | 06.04.25 |
| D          | UPDATE TOLERANCE, CHANGE HOLE SIZE  | PH  | 06.01.23 |
| C          | LENGTHEN AFT EXTENSION  | PH  | 05.09.27 |
| B          | DRAWING UPDATES   | PH  | 05.06.10 |
| A          | NEW ISSUE   | PH  | 05.02.07 |
| REV.       | DESCRIPTION   | BY  | DATE     |
| DESIGN     | PH  | <b>DART AEROSPACE USA, INC</b><br>PORT HADLOCK, WA<br>DRAWING NO. D3391<br>TITLE 412 FLOAT SKIDTUBE<br>SCALE NTS<br>COPYRIGHT © 2005 BY DART AEROSPACE USA, INC<br>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC |          |
| DRAWN      | JP  |   |          |
| CHECKED    | JP  |   |          |
| MFG. APPR. | JP  |   |          |
| APPROVED   | JP  |   |          |
| DE APPR.   | JP  |   |          |
| DATE       | 07.07.31  |   |          |

NO WORK ORDER WITHOUT NOTICE  
 SHOP COPY  
 RETURN TO  
 ENGINEERING  
 CONTROLLED COPY  
 SUBJECT TO AMENDMENT



**D3391-043 ASSEMBLY**

**RELEASED**  
07.11.24

**D3391-043 FLOAT SKIDTUBE ASSEMBLY PARTS LIST**

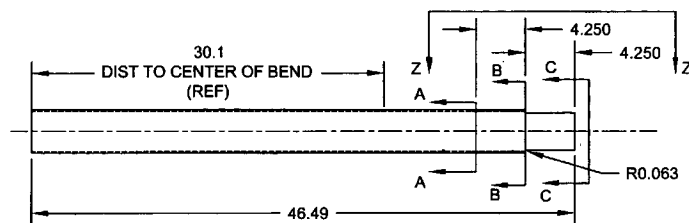
| QTY | PART NUMBER | DESCRIPTION             |
|-----|-------------|-------------------------|
| X   | D3391-043   | FLOAT SKIDTUBE ASSEMBLY |
| 1   | D3391-021   | FWD TUBE ASSEMBLY       |
| 1   | D3391-023   | MID TUBE ASSEMBLY       |
| 1   | D3391-025   | AFT TUBE ASSEMBLY       |
| 1   | D3564-1     | WEARSHOE                |
| 1   | D3564-3     | WEARSHOE                |
| 1   | D3564-5     | WEARSHOE                |
| 1   | D3566-1     | GASKET                  |
| 1   | D3566-5     | GASKET                  |
| 24  | AN3C4A      | BOLT                    |
| 12  | AN3C6A      | BOLT                    |
| 8   | AN3C7A      | BOLT                    |
| 44  | AN960C10L   | WASHER                  |

**GENERAL NOTES**

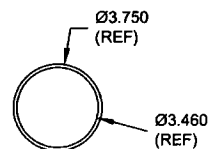
- 1) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 2) SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH  
AND AFTER INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH  
LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS  
OFF POWDER COATING WITH MEK DEGREASER.
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL Ø0.297 SIZE HOLES  
FOR WEARSHOE INSERTS. C'BORE AS NOTED AND INSTALL INSERTS EXCEPT  
WHERE INDICATED.

|            |           |   |
|------------|-----------|---|
| DESIGN     | <i>AN</i> | <b>DART AEROSPACE USA, INC</b>              |
| DRAWN      | <i>JC</i> | PORT HADLOCK, WA                            |
| CHECKED    | <i>h</i>  | DRAWING NO. REV. G                          |
| MFG. APPR. | <i>h</i>  | D3391 SHEET 2 OF 8                          |
| APPROVED   | <i>h</i>  | TITLE SCALE                                 |
| DE APPR.   | <i>h</i>  | 412 FLOAT SKIDTUBE NTS                      |
| DATE       | 07.07.31  | COPYRIGHT © 2005 BY DART AEROSPACE USA, INC |

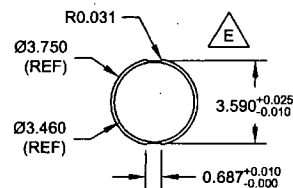
NO. 40524  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
ENGINEERING  
RETURN TO  
SHOP COPY



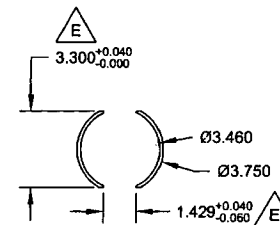
**D3391-1 CUTTING DETAIL**  
(MAKE FROM D6013-047 SKIDTUBE MATERIAL)



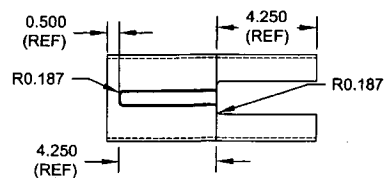
**SECTION A-A**  
(SCALE 1:5)



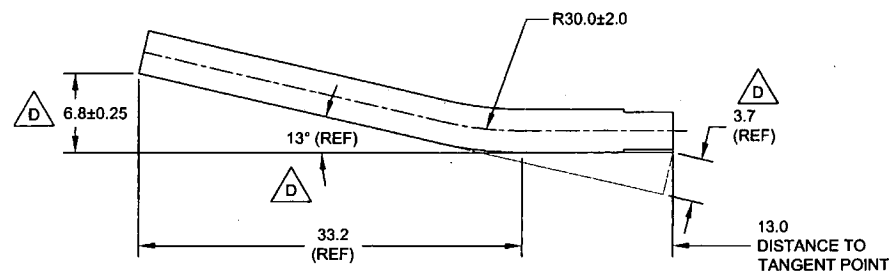
**SECTION B-B**  
(SCALE 1:5)



**SECTION C-C**  
(SCALE 1:5)



**VIEW Z-Z**  
(SCALE 1:5)



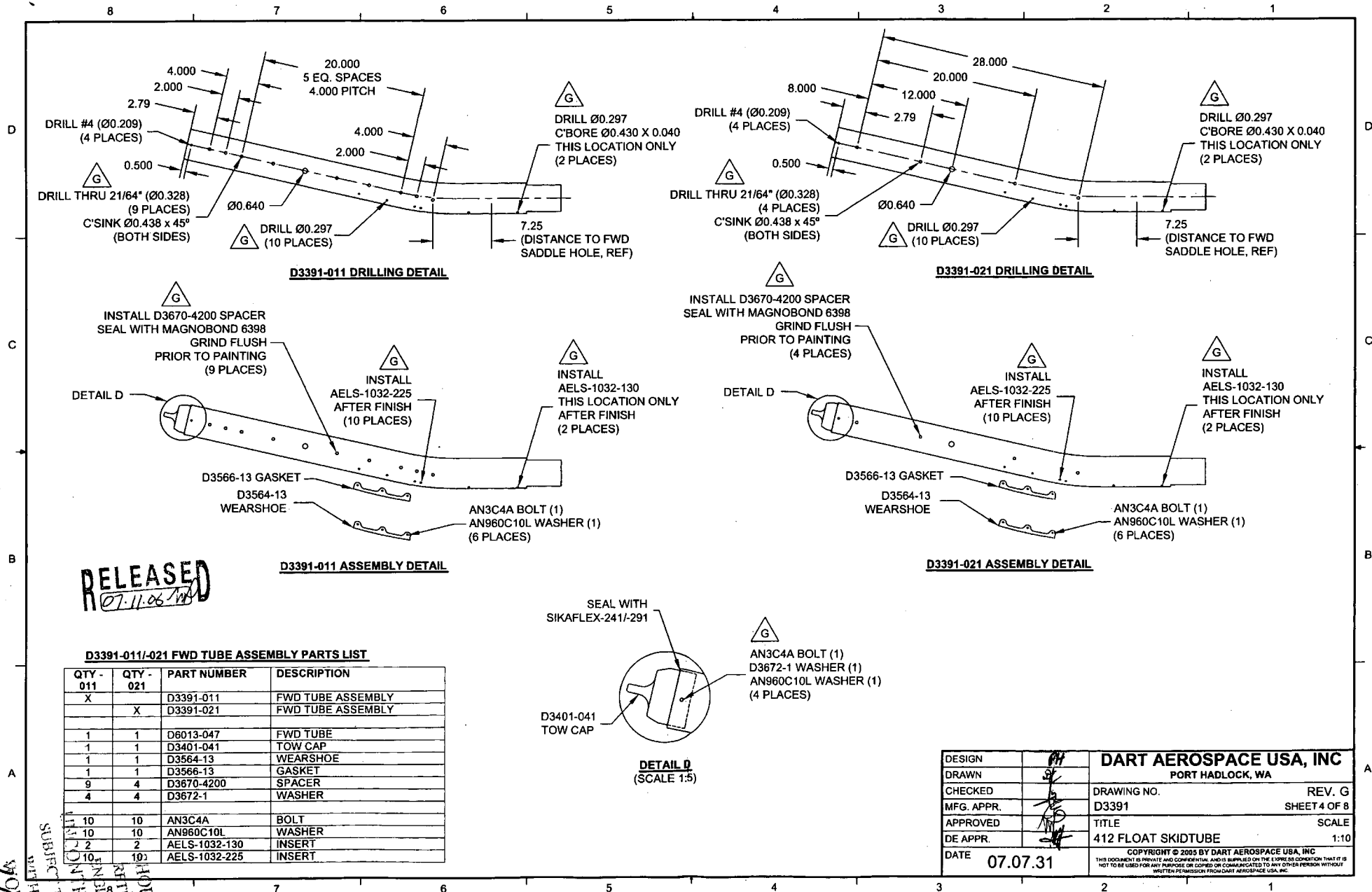
**D3391-011/-021 BENDING DETAIL**  
(MAKE FROM D3391-1)

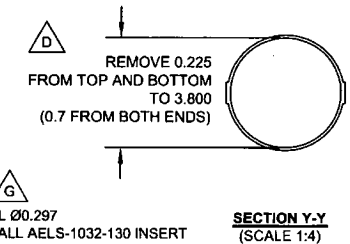
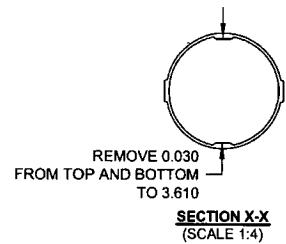
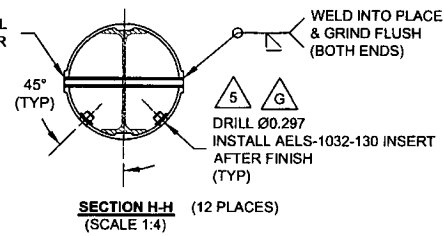
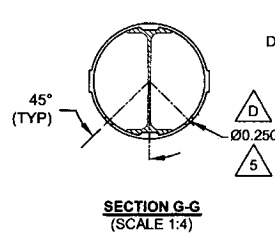
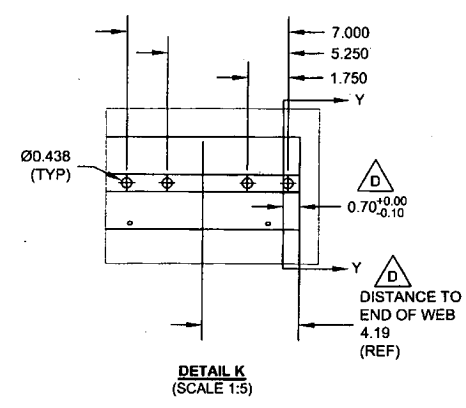
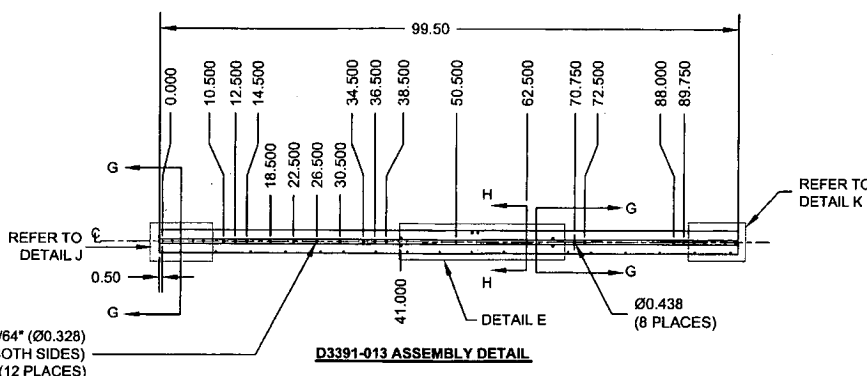
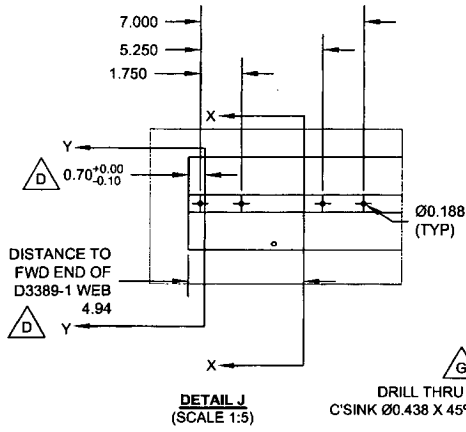
RELEASED  
07-11-26 MP

|            |          |  |              |
|------------|----------|--|--------------|
| DESIGN     | 41       | <b>DART AEROSPACE USA, INC</b>   |              |
| DRAWN      | SC       | PORT HADLOCK, WA   |              |
| CHECKED    | +        | DRAWING NO.  | REV. G       |
| MFG. APPR. | SC       | D3391  | SHEET 3 OF 8 |
| APPROVED   | MP       | TITLE  | SCALE        |
| DE APPR.   | MP       | 412 FLOAT SKIDTUBE   | 1:10         |
| DATE       | 07.07.31 | <small>COPYRIGHT © 2005 BY DART AEROSPACE USA, INC<br/>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small> |              |

NO. 40524  
WEEK ORDER  
SUBJECT TO AMENDMENT  
UNCONTROLLED COPY  
ENGINEERING  
RETURN TO  
SHOP COPY  
WITHOUT NOTICE

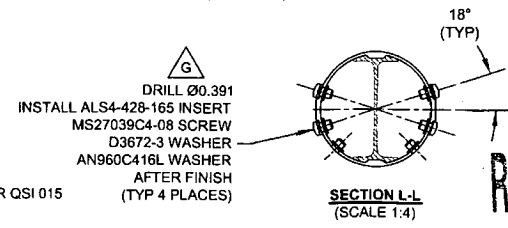
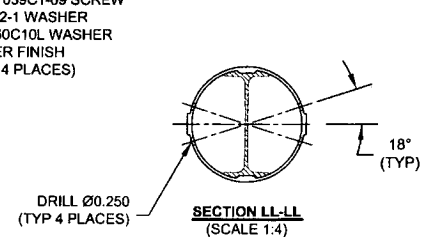
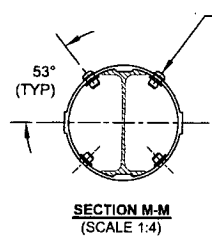
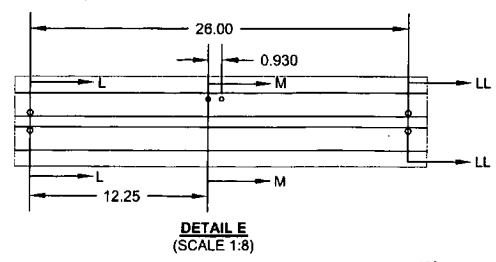






**D3391-013 MID TUBE ASSEMBLY PARTS LIST**

| QTY -013 | PART NUMBER   | DESCRIPTION       |
|----------|---------------|-------------------|
| X        | D3391-013     | MID TUBE ASSEMBLY |
| 1        | D2500-1-100   | EXTRUSION         |
| 1        | D3389-1       | WEB               |
| 12       | D3681-1       | SPACER            |
| 4        | D3672-1       | WASHER            |
| 4        | D3672-3       | WASHER            |
| 24       | AELS-1032-130 | INSERT            |
| 4        | ALS4-428-165  | INSERT            |
| 4        | AN960C10L     | WASHER            |
| 4        | AN960C416L    | WASHER            |
| 4        | MS27039C1-09  | SCREW             |
| 4        | MS27039C4-08  | SCREW             |

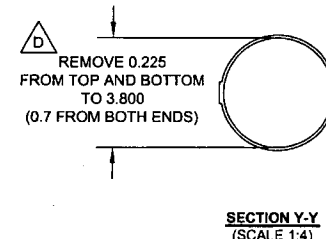
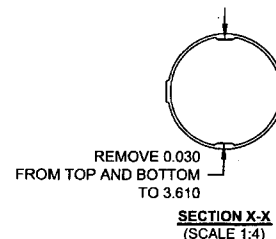
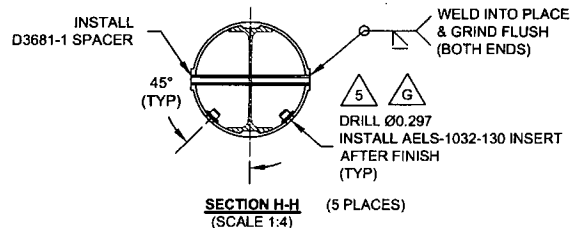
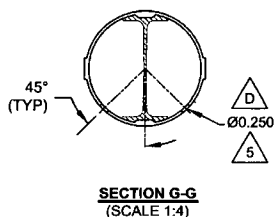
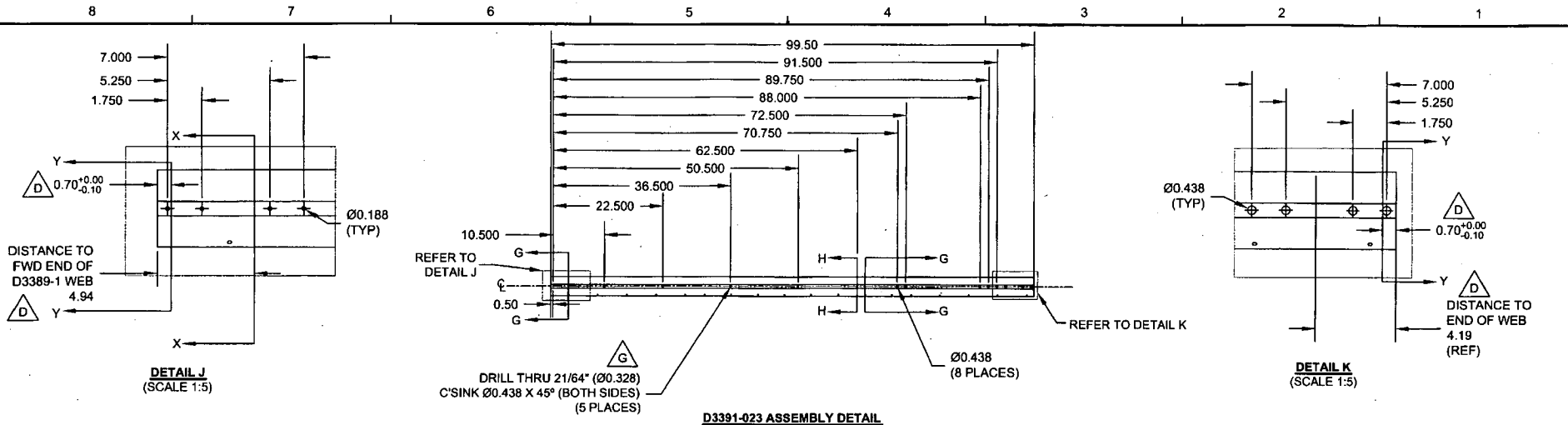


**D3391-013 MID TUBE ASSEMBLY**  
MATERIAL: MAKE FROM D2500-1-100 EXTRUSION  
INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-241/291 PER QSI 015  
WELDING PER DART QSI 004

|   |          |  |             |
|---|----------|--|-------------|
| DESIGN  | PH       | <b>DART AEROSPACE USA, INC.</b>              |             |
| DRAWN   | SP       | PORT HADLOCK, WA                             |             |
| CHECKED   |          | DRAWING NO.                                  | REV. G      |
| MFG. APPR.  |          | D3391  | SHEETS OF 8 |
| APPROVED  |          | TITLE  | SCALE       |
| DE APPR.  |          | 412 FLOAT SKIDTUBE                           | 1:20        |
| DATE  | 07.07.31 | COPYRIGHT © 2003 BY DART AEROSPACE USA, INC. |             |
| THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC. |          |  |             |

**RELEASED**  
07.11.04

WORK ORDER NO. 40524  
UNCONTROLLED COPY  
NOT FOR CONSTRUCTION  
NOT FOR AMENDMENT  
NOT FOR NOTICE



#### D3391-023 MID TUBE ASSEMBLY PARTS LIST

| QTY - 023 | PART NUMBER   | DESCRIPTION       |
|-----------|---------------|-------------------|
| X         | D3391-023     | MID TUBE ASSEMBLY |
| 1         | D2500-1-100   | EXTRUSION         |
| 1         | D3389-1       | WEB               |
| 5         | D3681-1       | SPACER            |
| 20        | AELS-1032-130 | INSERT            |

#### D3391-023 MID TUBE ASSEMBLY

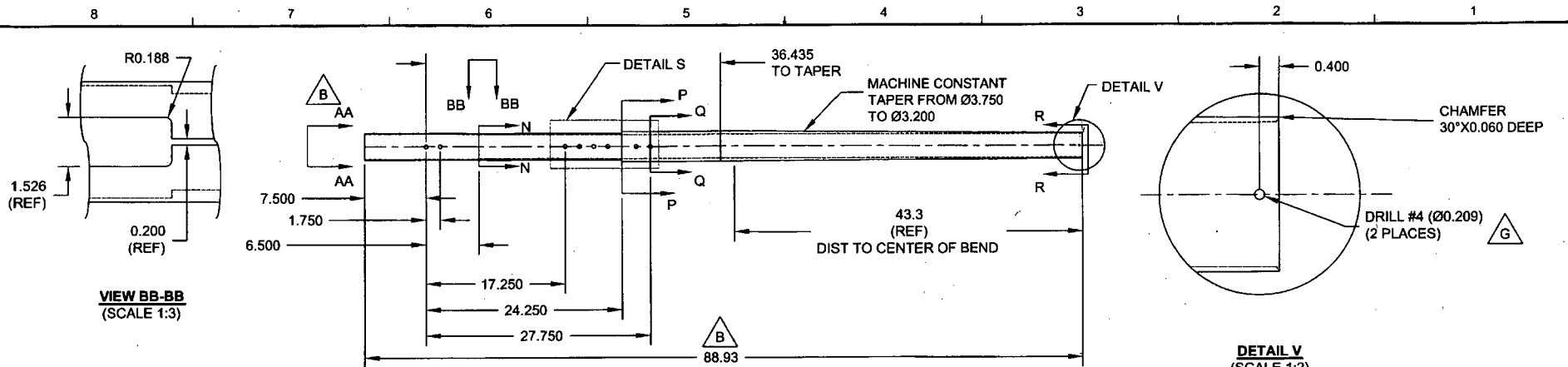
1) MATERIAL: MAKE FROM D2500-1-100 EXTRUSION  
 2) INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-241/291 PER QSI 015  
 3) WELDING: PER DART QSI 004

RELEASED  
 07.11.06/11

|            |          |  |              |
|------------|----------|--|--------------|
| DESIGN     | AM       | DART AEROSPACE USA, INC  |              |
| DRAWN      | DE       | PORT HADLOCK, WA   |              |
| CHECKED    | DE       | DRAWING NO.  | REV. G       |
| MFG. APPR. | DE       | D3391  | SHEET 6 OF 8 |
| APPROVED   | DE       | TITLE  | SCALE        |
| DE APPR.   | DE       | 412 FLOAT SKIDTUBE   | 1:20         |
| DATE       | 07.07.31 | COPYRIGHT © 2005 BY DART AEROSPACE USA, INC<br>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC. |              |

NO 40524  
 WITHOUT NOTICE  
 RETURN TO  
 SHOP COPY  
 RETURN TO  
 ENGINEERING  
 UNCONTROLLED COPY  
 SUBJECT TO AMENDMENT

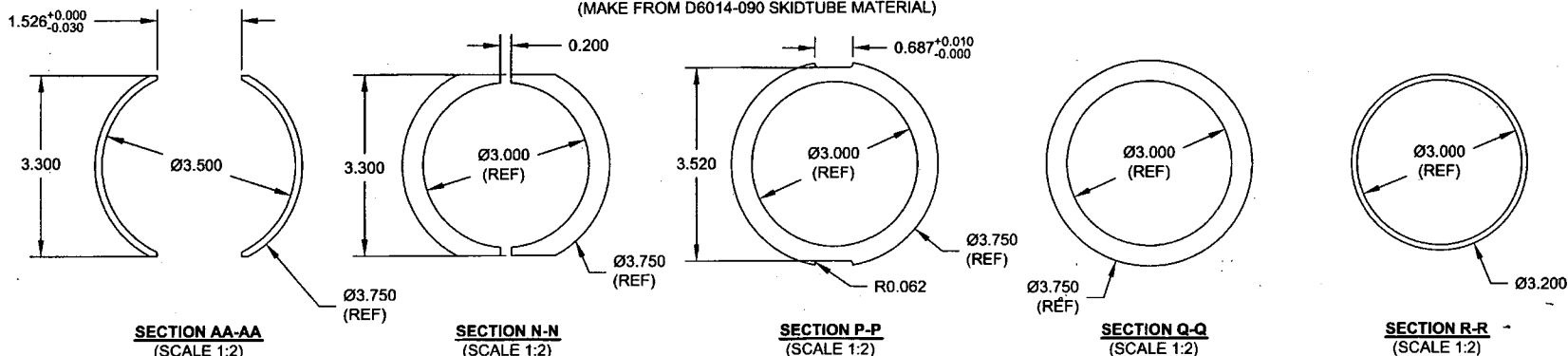




VIEW BB-BB  
(SCALE 1:3)

DETAIL V  
(SCALE 1:2)

D3391-3 AFT DRILLING AND CUTTING DETAIL  
(MAKE FROM D6014-090 SKIDTUBE MATERIAL)



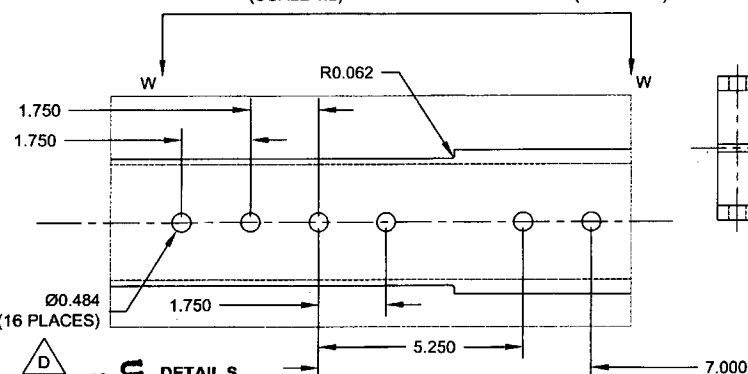
SECTION AA-AA  
(SCALE 1:2)

SECTION N-N  
(SCALE 1:2)

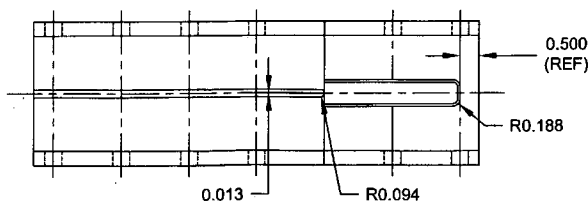
SECTION P-P  
(SCALE 1:2)

SECTION Q-Q  
(SCALE 1:2)

SECTION R-R  
(SCALE 1:2)



DETAIL S  
(SCALE 1:3)



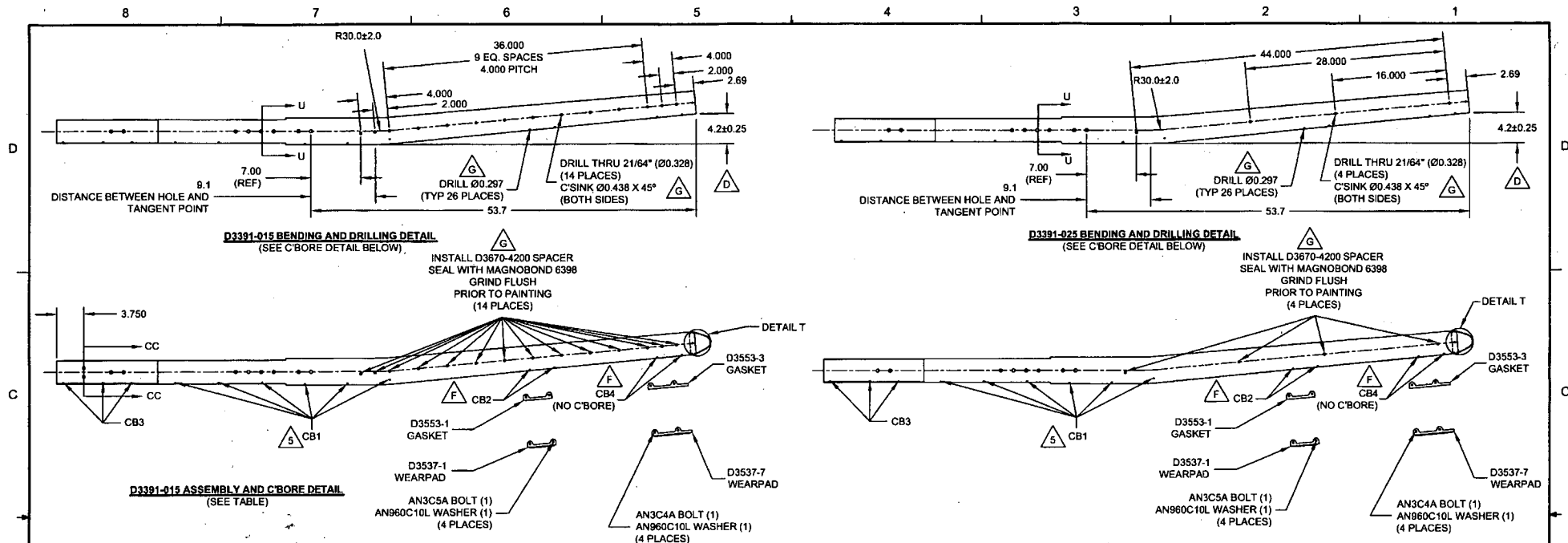
VIEW W-W  
(SCALE 1:3)

RELEASED  
07.11.06

|   |          |   |              |
|---|----------|---|--------------|
| DESIGN  |          | <b>DART AEROSPACE USA, INC</b>              |              |
| DRAWN   |          | PORT HADLOCK, WA                            |              |
| CHECKED   |          | DRAWING NO.                                 | REV. G       |
| MFG. APPR.  |          | D3391                                       | SHEET 7 OF 8 |
| APPROVED  |          | TITLE                                       | SCALE        |
| DE APPR.  |          | 412 FLOAT SKIDTUBE                          | 1:12         |
| DATE  | 07.07.31 | COPYRIGHT © 2005 BY DART AEROSPACE USA, INC |              |
| THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC. |          |   |              |

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED CO  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO 410524

NO  
WORK ORDER  
MILWAUKEE POLICE  
SUBJECT TO VERIFICATION  
UNCONTESTED CO  
BY NEEBING  
RELAY TO  
2ND COBA

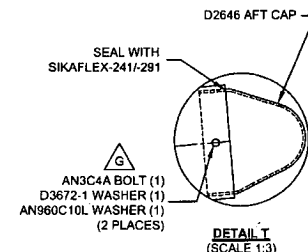
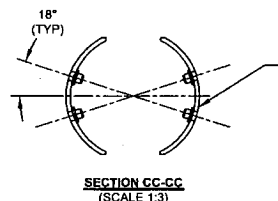
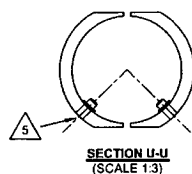


D3391-015/025 AFT TUBE ASSEMBLY PARTS LIST

| QTY - 015 | QTY - 025 | PART NUMBER   | DESCRIPTION       |
|-----------|-----------|---------------|-------------------|
| X         | X         | D3391-015     | AFT TUBE ASSEMBLY |
|           |           | D3391-025     | AFT TUBE ASSEMBLY |
| 1         | 1         | D6014-090     | AFT TUBE          |
| 1         | 1         | D2646         | AFT CAP           |
| 1         | 1         | D3537-1       | WEARPAD           |
| 1         | 1         | D3537-7       | WEARPAD           |
| 1         | 1         | D3553-1       | GASKET            |
| 1         | 1         | D3553-3       | GASKET            |
| 14        | 4         | D3670-4200    | SPACER            |
| 2         | 2         | D3672-1       | WASHER            |
| 14        | 14        | AELS-1032-130 | INSERT            |
| 12        | 12        | AELS-1032-225 | INSERT            |
| 4         | 4         | ALS4-428-165  | INSERT            |
| 6         | 6         | AN3C4A        | BOLT              |
| 4         | 4         | AN3C5A        | BOLT              |
| 10        | 10        | AN960C10L     | WASHER            |

C'BORE HOLES MARKED CB1-CB4 AS FOLLOWS AND INSTALL AELS-1032-XXX AFTER FINISH AS NOTED

| HOLES MARKED | QTY D3391-015 | QTY D3391-025 | C'BORE         | PIN           |
|--------------|---------------|---------------|----------------|---------------|
| CB1          | 12            |               | Ø0.430 X 0.170 | AELS-1032-225 |
| CB2          | 4             |               | Ø0.430 X 0.170 | AELS-1032-130 |
| CB3          | 6             |               | Ø0.430 X 0.040 | AELS-1032-130 |
| CB4          | 4             |               | NONE           | AELS-1032-130 |



RELEASED  
07-11-06

|            |          |   |              |
|------------|----------|---|--------------|
| DESIGN     | AM       | DART AEROSPACE USA, INC                     |              |
| DRAWN      | SC       | PORT HADLOCK, WA                            |              |
| CHECKED    | JS       | DRAWING NO.                                 | REV. G       |
| MFG. APPR. | JD       | D3391                                       | SHEET 8 OF 8 |
| APPROVED   | WJ       | TITLE                                       | SCALE        |
| DE APPR.   |          | 412 FLOAT SKIDTUBE                          | 1:12         |
| DATE       | 07.07.31 | COPYRIGHT © 2005 BY DART AEROSPACE USA, INC |              |

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSES OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.

NO. 125014  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
CONTROLLED COPY  
ENGINEERING  
RETURN TO  
SHOP COPY  
PY

